NRO REVIEW COMPLETED

MCGWG-M-45

Referral review completed by NIMA 3/1/01

COMIREX MAPPING, CHARTING AND GEODESY WORKING GROUP

Minutes of Meeting Held in Room 2D921 Pentagon 1300 - 1500 Hours, 2 June 1969

PRESIDING

Colonel Lloyd L. Rall Chairman

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	1. PURPOSE OF MEETING: The Chairman mentioned that consistent with the agenda forwarded 27 May 1969, there was only one subject for the meeting, that is, a briefing by the NRO on weather in the tropical belt. It was pointed out that the NRO was continually trying to do a more effective job with imagery satellites and that this experience could be brought to bear on photographing such difficult areas as South America in the tropical belt; it was mentioned that Jones of the same office would
ı	make the presentations.
	2. WEATHER IN THE TROPICAL BELT:
	cited numerous efforts underway to improve the effectiveness of current satellite systems. He mentioned that the most recent missions had not provided the opportunity for photography in the tropical belt but there was some confusion as to the actual launch time of the last KH-4 mission since it proceeded at 20 hours earlier or 4 hours later than previous normal launches, rather than 4 hours earlier as had been erroneously mentioned. Experience of the NRO indicated that a lot of film had been expended in the bad weather areas in accordance with our evaluations of required material and that only 3 percent of the areas covered had been actually acceptable. In order to save film, he mentioned that NRO was not attempting MC&G areas unless there was a 90 percent cloud free prediction.
	that he hoped that he had information of use to the Working Group pointing out that there were many misconceptions such as the fact that there is no relation between the weather in North America and South America. His presentation included time lapse photography which had been accomplished by the Advanced Technology Satellite from approximately 23,000 miles. The photographs have a resolution of three to five miles and were composited in time lapse manner from exposures taken every 20 minutes. The photography displayed over the South American region was rather a continuous condition of scattered heavy clouds. Part of the time it could be noted that in certain regions there was a quick expansion of cloud coverage directly after early morning sunlight.
	also presented photography from the ESSA satellite at about 740 miles which showed that in a number of areas that had appeared cloud free in the time lapse photography there was very extensive salt and pepper type cloud areas throughout the area concerned. He further presented photography from the ESSA satellite of one photograph per day taken in the middle of the afternoon and presented in time lapse fashion for a 5 to 10 day interval. These
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	examples illustrated extreme cloudy conditions as was expected in the
	examples illustrated extreme cloudy conditions as was expected in mentioned that it was very
. *	middle of the afternoon. mentioned that it was very
	difficult to study past data and predict with any kind of accuracy
	the setupl cloud conditions. This in part was because of the limited
	number of stations and the times of day during which the information
	was collected. passed around for review pictures of the
• .	was collected. passed around for review pictures of the
	first few days of each month in 1967 taken by the ESSA satellite
	-tich confirmed the extremely cloudy conditions. He mentioned that
	he had made numerous comparisons correlating photograph prediction
	data and actual read out from KH-4 photography at TOPOCOM and found
	that the correlation between predicted clear and actual clear was
	very low.
	d. Principal points of discussion follow:
	(1) mentioned that one could see from the films
	mentioned that one could see from the limb
	that cloud free conditions were much better in the early morning,
	however said that this was true in many areas but not for
	all areas and would vary by region. mentioned that he could
	determine from various data the most appropriate time of day for cloud
	free conditions, area by area.
	free Conditions, area by area.
	(2) raised the question as to whether it was feasible
	raised the question as to whether it was leastfile
	to consider a trade off between the best time of day for MC&G over
	particular regions compared to optimizing on priority targets for
	intolligence purposes lindicated that data could be
	developed for this comparison however, the trade oil evaluations would
	not be done by NRO but by COMIREX and/or USIB. It was mentioned that
	the MC&G Working Group had altered the minimum sun angle which had
	the MCAG working Group had artered the menthor areas in mind it was
	been previously established with good weather areas in mind, it was
	concluded that it was much more important in the tropical belt as
	curgosted by to photograph whenever imagery could be
	asked that while this seemed apparent to everyone
	and NRO had been keeping this in mind, it would be better for the MC&G
	Working Group to revise the criteria for the tropical belt.
	Working Group to revise the criteria for the drop-
	camo and that the group should hear
•	of NRO explained that the group should bear
100	in mind that weather predictions available to NRO were on a rev by rev
	basis and on a planning basis. The planning data as received from
	real and other sources is prepared for a one day to five day projection;
	where as, the rev by rev predictions are prepared using data that is
	where as, the rev by rev predictions and profine
	three to four hours old.
	(4) Questions were raised by
	concerning photographs indicating weather in South America. Iney
	mentioned that the good weather per month agreed very closely with
	actual experience in obtaining photos by aircraft.
	actual experience in observable

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		(5) At the request of the Chairman described	4,7
25X1A		(5) At the request of the Chairman, described a number of investigations he had been making that would show a very	•
		poor correlation between the weather predictions and after-the-fact	
	•	photography by the KH-4 system. These investigations seem to indicate	
		that there were many instances that demonstrated that photography	
		should be accomplished even though the weather predictions indicated	*.
		cloud coverage. Such investigations had caused them to conclude that	~
		photography for the highest priority intelligence targets should be	
		taken everywhere there was enough light.	*
25X1A		(6) mentioned that much could be learned from	
		careful examination at TOPOCOM of the coverage already on hand of the	
	÷	tropical belt which is presently rejected and that arrangements would	
	•	be made for looking into this matter and coming up with some	•
		recommendations.	
25X1A	•	(7) mentioned that while the weather picture	
		continues to look bad for the South America and the general tropical	
		belt regions, there were vast areas of good weather scattered in other	
		areas of the world.	
25X1A		(8) asked that the Group consider what had	
	•	been explained by the NRO. It was intended that the MC&G Working	
		Group arrive at practicable steps that might increase the use of	
		optical photography. He mentioned that the NRO study of the tropical belt clearly supported the need for an all weather collection system	
	•	providing data for MC&G purposes.	
		providing data for now purposes.	
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		Chairman	
	2.	COMIREX MC&G Working Group	
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